

### **AMENDMENTS TO THE CLAIMS**

Claims 1-30 are pending in the instant application. Claims 2-10, 12-21, and 29 were previously amended in the October 6, 2006 response. Claims 8, 18, and 28 have been withdrawn. Claims 31, 32, and 33 have been added. This listing of claims will replace all prior versions and listings of claims in the application.

#### **Listing of claims:**

1. (Original) A method for controlling an antenna system, the method comprising:
  - dwelling on at least one of a plurality of antennas;
  - determining a gain for said dwelled-on at least one of a plurality of antennas;
  - determining at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas; and
  - selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of signal quality metrics from said dwelled-on at least one of a plurality of antennas.
2. (Previously presented) The method according to claim 1, comprising selecting a starting antenna from said at least one of a plurality of antennas.
3. (Previously presented) The method according to claim 2, comprising selecting said starting antenna based on a predetermined criteria.
4. (Previously presented) The method according to claim 2, comprising selecting said starting antenna based on random selection.

5. (Previously presented) The method according to claim 2, comprising selecting said starting antenna based on prior history said selection of said portion of dwelled-on at least one of a plurality of antennas.

6. (Previously presented) The method according to claim 2, comprising determining a starting gain for said starting antenna using an automatic gain control.

7. (Previously presented) The method according to claim 1, comprising selecting antenna dwelling order based on a predetermined criteria.

8. (Withdrawn) The method according to claim 1, comprising determining said at least one of said determined gain for said dwelled-on at least one of a plurality of antennas based on said at least one of a plurality of signal quality metrics, on at least one of a plurality of power coupling parameters, and/or a portion of said determined gain for said dwelled-on at least one of a plurality of antennas.

9. (Previously presented) The method according to claim 1, wherein said at least one of a plurality of signal quality metrics may comprise at least one of the following: an estimated received power, a received power, a signal-to-noise ratio, a bit error rate, a packet error rate, a propagation channel characteristic, and/or a channel interference.

10. (Previously presented) The method according to claim 1, comprising selecting said portion of said dwelled-on at least one of a plurality of antennas based on meeting a specified range of values for at least one of said plurality of signal quality metrics.

11. (Original) A machine-readable storage having stored thereon, a computer program having at least one code section for controlling an antenna system, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

dwelling on at least one of a plurality of antennas;

determining a gain for said dwelled-on at least one of a plurality of antennas;

determining at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas; and

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of powers from said dwelled-on at least one of a plurality of antennas.

12. (Previously presented) The machine-readable storage according to claim 11, comprising code for selecting a starting antenna from said at least one of a plurality of antennas.

13. (Previously presented) The machine-readable storage according to claim 12, comprising code for selecting said starting antenna based on a predetermined criteria.

14. (Previously presented) The machine-readable storage according to claim 12, comprising code for selecting said starting antenna based on random selection.

15. (Previously presented) The machine-readable storage according to claim 12, comprising code for selecting said starting antenna based on prior history said selection of said portion of dwelled-on at least one of a plurality of antennas.

16. (Previously presented) The machine-readable storage according to claim 12, comprising code for determining a starting gain for said starting antenna using an automatic gain control.

17. (Previously presented) The machine-readable storage according to claim 11, comprising code for selecting antenna dwelling order based on a predetermined criteria.

18. (Withdrawn) The machine-readable storage according to claim 11, comprising code for determining said at least one of said determined gain for said

dwelled-on at least one of a plurality of antennas based on said at least one of a plurality of signal quality metrics, on at least one of a plurality of power coupling parameters, and/or a portion of said determined gain for said dwelled-on at least one of a plurality of antennas.

19. (Previously presented) The machine-readable storage according to claim 11, wherein said at least one of a plurality of signal quality metrics may comprise at least one of the following: an estimated received power, a received power, a signal-to-noise ratio, a bit error rate, a packet error rate, a propagation channel characteristic, and/or a channel interference.

20. (Previously presented) The machine-readable storage according to claim 11, comprising code for selecting said portion of said dwelled-on at least one of a plurality of antennas based on meeting a specified range of values for at least one of said plurality of signal quality metrics.

21. (Previously presented) A system for controlling an antenna system, the system comprising:

a processor that dwells on at least one of a plurality of antennas;

said processor determines a gain of said dwelled-on at least one of a plurality of antennas;

said processor determines at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas; and

said processor selects for signal processing, a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of powers from said dwelled-on at least one of a plurality of antennas.

22. (Original) The system according to claim 21, wherein said processor selects a starting antenna from said at least one of a plurality of antennas.

23. (Original) The system according to claim 22, wherein said processor selects said starting antenna based on a predetermined criteria.

24. (Original) The system according to claim 22, wherein said processor selects said starting antenna based on random selection.

25. (Original) The system according to claim 22, wherein said processor selects said starting antenna based on prior history of said selection of said portion of dwelled-on at least one of a plurality of antennas.

26. (Original) The system according to claim 22, wherein said processor determines a starting gain for said starting antenna using an automatic gain control.

27. (Original) The system according to claim 21, wherein said processor selects antenna dwelling order based on a predetermined criteria.

28. (Withdrawn) The system according to claim 21, wherein said processor determines said at least one of said determined gain for said dwelled-on at least one of a plurality of antennas based on said at least one of a plurality of signal quality metrics, on at least one of a plurality of power coupling parameters, and/or a portion of said determined gain for said dwelled-on at least one of a plurality of antennas.

29. (Previously presented) The system according to claim 21, wherein said at least one of a plurality of signal quality metrics may comprise at least one of the following: an estimated received power, a received power, a signal-to-noise ratio, a bit error rate, a packet error rate, a propagation channel characteristic, and/or a channel interference.

30. (Original) The system according to claim 21, wherein said processor selects said portion of said dwelled-on at least one of a plurality of antennas based on meeting a specified range of values for at least one of said plurality of signal quality metrics.

31. (New) A method for controlling an antenna system, the method comprising:

dwelling on at least one of a plurality of antennas;

determining at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas;

determining a gain for said dwelled-on at least one of a plurality of antennas, wherein said gain is based on at least one of the following: said at least one of said plurality of signal quality metrics, at least one of a plurality of power coupling parameters, and a portion of said determined gain for said dwelled-on at least one of a plurality of antennas; and

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of signal quality metrics from said dwelled-on at least one of a plurality of antennas.

32. (New) A machine-readable storage having stored thereon, a computer program having at least one code section for controlling an antenna system, the at least one code section being executable by a machine for causing the machine to perform steps comprising:

dwelling on at least one of a plurality of antennas;

determining at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas;

determining a gain for said dwelled-on at least one of a plurality of antennas, wherein said gain is based on at least one of the following: said at least one of said plurality of signal quality metrics, at least one of a plurality of power coupling parameters, and a portion of said determined gain for said dwelled-on at least one of a plurality of antennas; and

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of signal quality metrics from said dwelled-on at least one of a plurality of antennas.

33. (New) A system for controlling an antenna system, the system comprising:  
a processor that dwells on at least one of a plurality of antennas;

said processor determines at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas;

said processor determines a gain of said dwelled-on at least one of a plurality of antennas, wherein said gain is based on at least one of the following: said at least one of a plurality of signal quality metrics, at least one of a plurality of power coupling parameters, and a portion of said determined gain for said dwelled-on at least one of a plurality of antennas; and

said processor selects for signal processing, a portion of said dwelled-on at least one of a plurality of antennas based on said determined gain and said determined at least one of a plurality of powers from said dwelled-on at least one of a plurality of antennas.